

**NOVELTY OF THE INVENTION****CLAIMS**

1. A stereoscopic real time or static image viewing system characterized in that it comprises: first image capturing means (1) for capturing at least one original image (2), either with or without movement; conversion means (3) for (converting) images to digital and/or analog signals, which receive the original image (2) and convert it to an original image signal (4); image signal duplicating means (5) which receive the original image signal (4) to simultaneously generate two image signals, a first duplicated image signal (6) and a second duplicated image signal (7); a first image modifying unit (30), which generates from the first duplicated image signal (6) a first modified image signal (11) that consists of the original image (2) under a perspective that differs from the one with which it was originally captured by the first image capturing means (1); and three-dimensional viewing means (12) that receive the second duplicated image signal (7) and the first modified image signal (11) to achieve the three-dimensional viewing of the original image (2) by combining an image obtained from the second duplicated image signal (7) and a modified image obtained from the first modified image signal (11).
2. A stereoscopic real time or static image viewing system in accordance with Claim 1, moreover characterized in that it comprises the first image capturing means (1) that are selected from among activities or events that occur live, using for this purpose video cameras, surgical microscopes, photographic cameras, ultrasound, navigators, endoscopes, or any other system for obtaining video and/or printed images.
3. A stereoscopic real time or static image viewing system in accordance with Claim 2, moreover characterized in that the endoscopes are selected from among neuroendoscopes, endoscopes, thoraxoscopes, laparoscopes, pelviscopes, arthroscopes, three-dimensional endoscopes (E-3D).
4. A stereoscopic real time or static image viewing system in accordance with Claim 1, moreover characterized in that the image signal duplicating means (5) are a "Y" type signal divider.

5. A stereoscopic real time or static image viewing system in accordance with Claim 1, moreover characterized in that the digital and/or analog image signal conversion means (3) and the image signal duplication means (5) are included in the first image capturing means (1).

6. A stereoscopic real time or static image viewing system in accordance with Claim 1, moreover characterized in that the first image modifying unit (30) comprises: first image projection means (8), which receive the first duplicated image signal (6) to project a first duplicated image (9); and second image capturing means (10) for capturing this duplicated image (9) under a first oblique visual angle of incidence  $\alpha$  with respect to the normal of the projection surface of these first image projection means (8), these second image capturing means (10) generating the first modified image signal (11).

7.- A stereoscopic real time or static image viewing system in accordance with Claim 6, moreover characterized in that the first image projection means (8) are selected from among video screens with or without kinescope, liquid crystal screens (LCD), plasma screens, or video projection screens, onto which an image is projected by means of a video projector.

8. A stereoscopic real time or static image viewing system in accordance with Claim 7, moreover characterized in that the video projection screens have a flat surface.

9. A stereoscopic real time or static image viewing system in accordance with Claim 6, moreover characterized in that the second image capturing means (10) are selected from among video or digital cameras.

10. A stereoscopic real time or static image viewing system in accordance with Claim 6, moreover characterized in that the first duplicated image (9) as well as the first image projection means (8) and the second image capturing means (10) are located in a relatively hermetic and light-insulated environment.

11. A stereoscopic real time or static image viewing system in accordance with Claim 6, moreover characterized in that the first oblique visual angle of incidence  $\alpha$  has a value between  $0^\circ$  and  $90^\circ$ .

12. A stereoscopic real time or static image viewing system in accordance with Claim 11, moreover characterized in that the first oblique visual angle of incidence  $\alpha$  has a value from  $6^\circ$  to  $30^\circ$ .

13. A stereoscopic real time or static image viewing system in accordance with Claim 1, moreover characterized in that the first image modifying unit (30) comprises: first image projection means (8) integrated into first image editing means (31) which generate from the first original image signal (6) a first edited image (32) that is projected onto these first image projection means (8); and second image capturing means (10) placed in front of the first image projection means (8) to capture the first edited image (32) and generate the first modified image signal (11), the first edited image (32) consisting of the original image (2) with an effect provided by the first image editing means (31), so that it appears to have been captured under a different perspective with respect to the one by means of which it was originally captured.

14. A stereoscopic real time or static image viewing system in accordance with Claim 13, moreover characterized in that the first editing means (31) directly generate the first modified image signal (11).

15. A stereoscopic real time or static image viewing system in accordance with Claim 1, moreover characterized in that the three-dimensional viewing means (12) comprise: a first image projection element (13) and a second image projection element (14) where the first image projection element (13) permits the viewing of the original image that has been modified in its perspective and which is obtained from the first modified image signal (11), while the second of projection element (14) permits viewing of the original image (2) obtained from the second duplicated image signal (7).

16. A stereoscopic real time or static image viewing system in accordance with Claim 15, moreover characterized in that the first (13) and the second (14) image projection elements are selected from among liquid crystal screens, plasma screens or screens with kinescope, or any other image projection means.

17. A stereoscopic real time or static image viewing system in accordance with Claim 15, moreover characterized in that the first (13) and the second (14) image projection elements are mounted on a cephalic and/or facial placement support (15) similar to the frame of certain eyeglasses, which, in addition to permitting the users to move their head freely without losing the three-dimensional feeling, permits maintaining the "eye-hand" relation and observing the images for extended periods of time and directly in front of the eyes.

18. A stereoscopic real time or static image viewing system in accordance with Claim 17, moreover characterized in that an observer who is placed in front of the three-dimensional viewing means (12) sees with one eye (16) the original image (2) projected on the second image projection element (14), while with the opposite eye (17) perceiving in the first image projection element (13) the same original image (2) under a perspective that differs from the one under which it was originally captured.

19. A stereoscopic real time or static image viewing system in accordance with Claim 1, moreover characterized in that the second duplicated image signal (7) and the first modified image signal (11) are multiplied as many times as desired to provide several observers the ability to see them simultaneously in other independent three-dimensional viewing means.

20. A stereoscopic real time or static image viewing system in accordance with Claim 1, moreover characterized in that this system additionally comprises: image mixing and selecting means (17) that receive the original image signal (4) and mix it with an auxiliary image signal (4') that contains at least one auxiliary image, these image mixing and selecting means (17) generating an image signal in boxes (4/4') ("picture in picture") that is integrated by this original image signal (4) and this auxiliary image signal (4'), this signal of images in boxes (4/4') being later received by these image duplicating means (5) that simultaneously generate two image signals, a first duplicated image signal (6) and a second duplicated image signal (7), the first duplicated image signal (6) being received by the first image modifying unit (30), which generates a first modified image signal (11) that consists of a combination in boxes of the original image (2) and of the auxiliary image, both under a perspective that differs from the one under which they were originally captured, the first modified image signal (11) and the second duplicated image signal (7) being received by these three-dimensional viewing means (12) in which three-dimensional viewing is achieved and in boxes the original image (2) and the auxiliary image by means of the combination in boxes of an image obtained from the second duplicated image signal (7) and from an image in boxes modified in its perspective obtained from the first modified image signal (11).

21. A stereoscopic real time or static image viewing system in accordance with Claim 20, moreover characterized in that the image selecting and mixing means (17) are a conventional type video mixer.

22. A stereoscopic real time or static image viewing system in accordance with Claim 20, moreover characterized in that the auxiliary image signal (4') is obtained or generated by image capturing means that are selected from among activities or events that occur live, video cameras, surgical microscopes, photographic cameras, ultrasound, navigators, endoscopes, or any other system for obtaining video and/or printed images.

23. A stereoscopic real time or static image viewing system in accordance with Claim 1, moreover characterized in that the stereoscopic real time or static image viewing system additionally comprises: a second image modifying unit (40), which generates, from the second duplicated image signal (7) a second modified image signal (21) that consists of the original image (2) under a perspective that differs from both the one by means of which it was captured by the first image capturing means (1) and is different from the perspective that is achieved by means of the first image modifying unit (30) by means of which, on the three-dimensional viewing means (12), the first (11) and second (21) modified image signals are received to achieve the three-dimensional viewing of the original image (2) by means of the combination of a first modified image obtained from the first duplicated image signal (11) and a second modified image obtained from the second modified image signal (21).

24. A stereoscopic real time or static image viewing system in accordance with Claims 6 and 23, moreover characterized in that the second image modifying unit (40) comprises: second image projection means (18) that receive the second duplicated image signal (7) to project a second duplicated image (19); and third image capturing means (20) for capturing this second duplicated image (19) under a second oblique visual angle of incidence  $\beta$  with respect to the normal of the projection surface of these second image projection means (18) where these third image capturing means (20) generate this second modified image signal (21), and this second oblique visual angle of incidence  $\beta$  differs from the first visual angle of incidence  $\alpha$  in the first image modifying unit (30).

25.- A stereoscopic real time or static image viewing system in accordance with Claim 24, moreover characterized in that the second image projection means (18) are selected from among video screens with or without a kinescope, liquid crystal screens (LCD), plasma screens, or video projection screens, on which an image is projected by means of a video projector.

26. A stereoscopic real time or static image viewing system in accordance with Claim 25, moreover characterized in that the video projection screens have a flat surface.

27. A stereoscopic real time or static image viewing system in accordance with Claim 24, moreover characterized in that the third image capturing means (20) are selected from among video or digital cameras.

28. A stereoscopic real time or static image viewing system in accordance with Claim 24, moreover characterized in that the second projection means (18) and the third image capturing means (20) together with the second duplicated image (19) are located in a relatively hermetic and light-insulated environment.

29. A stereoscopic real time or static image viewing system in accordance with Claim 24, moreover characterized in that the second oblique visual angle of incidence  $\beta$  has a value between  $0^\circ$  and  $90^\circ$ .

30. A stereoscopic real time or static image viewing system in accordance with Claim 29, moreover characterized in that the second oblique visual angle of incidence  $\beta$  has a value from  $6^\circ$  to  $30^\circ$ .

31. A stereoscopic real time or static image viewing system in accordance with Claim 24, moreover characterized in that the second image modifying unit (40) comprises: second image projection means (18) integrated into second image editing means (41), which generate from the second original image signal (7) a second edited image (42) that is projected on these second image projection means (18) where the second edited image (42) consists of the original image (2) with an effect provided by the second image editing means (41) in such a way that the original image (2) appears to have been captured under a different perspective with respect to the one under which it was originally captured; and the third image capturing means (20) placed in front of the second image projection means (18) to capture the second edited image (42) and generate the second modified image signal (21).

32. A stereoscopic real time or static image viewing system in accordance with Claim 23, moreover characterized in that the stereoscopic real time or static image viewing system additionally comprises: image mixing and selecting means (17) that receive the original image signal (4) and mix it with an auxiliary image signal (4') that contains at least one auxiliary

image, where these image mixing and selecting means (17) generate a signal of images in boxes (4/4') (picture in picture) integrated by the original image signal (4) and the auxiliary image signal (4'), this signal of images in boxes (4/4') being later received by these image duplication means (5) that simultaneously generate two image signals, a first duplicated image signal (6) and a second duplicated image signal (7), the first duplicated image signal (6) being received by the first image modifying unit (30), which generates from the first duplicated image signal (6) a first modified image signal (11) that consists of a combination in boxes of the original image (2) and the auxiliary image, both under a perspective that differs from the one under which they were originally captured, the second duplicated signal being received by the second image modifying unit (40) that generates a second modified image signal (21) that consists of a combination in boxes of the original image (2) and the auxiliary image, both under a perspective that differs both from the one by means of which they were originally captured and different from the perspective that is achieved by means of the first image modifying unit (30), by means of which, in the three-dimensional viewing means (12), the first (11) and second (21) modified image signals are received to achieve three-dimensional viewing of the original image (2) and of the auxiliary image by means of the combination of two images in modified boxes obtained from the image signals (11) and (21), each signal offering a perspective that differs from the original image (2) and the auxiliary image.

33. A stereoscopic real time or static image viewing system in accordance with Claim 1, moreover characterized in that the means of conversion of images to digital signals can comprise microcomponents, integrated circuits, chips or any other electronic system that processes the original visual information and modifies it simulating the three-dimensional effect.